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**BY ELECTRONIC FILING**

Marlene H. Dortch, Secretary  
Federal Communications Commission  
445 12<sup>th</sup> Street, SW  
Room CY-B402  
Washington, DC 20554

***RE: Comments of United Airlines -- WT Docket No. 04-435, Amendment of the Commission's Rules to Facilitate the Use of Cellular Telephones and other Wireless Devices Aboard Airborne Aircraft***

United Airlines ("United") hereby submits comments in response to the Federal Communications Commission's ("FCC" or "Commission") Notice of Proposed Rulemaking concerning the airborne use of 800 MHz cellular handsets and other wireless devices ("transmitting portable devices" or T-PEDs).<sup>1</sup> 70 FR 11916. United understands that, although the Commission proposes to relax or remove its prohibition on the airborne use of certain wireless devices, the airborne use of these devices will remain subject to the "rules and policies of the [Federal Aviation Administration] FAA and aircraft operators." Id.

United commends the FCC's efforts to adopt a more market-responsive regulatory policy with respect to transmitting portable devices while acknowledging the need to ensure the safety of passengers and crew onboard an aircraft. United understands that other interested parties have already filed comments detailing their concerns regarding network interference that may result from the airborne use of cellular technology. United does not wish to comment on those issues but wishes instead to emphasize its concerns over safety to the Commission as it considers lifting or easing its restrictions on the airborne use of T-PEDs, such as cellular telephones. As further detailed below, United believes that government agencies approving the airborne use of T-PEDs and other innovative technology must thoroughly evaluate what impact the use of such technology may have on aircraft systems and

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<sup>1</sup> United's comments are specifically limited to the airborne use of transmitting portable devices ("T-PEDs") that use cell phone radio channels. On occasion, United uses the term "pico cell T-PEDs" to denote T-PEDs that would utilize any approved pico cells. United's use of this term is intended to encompass wireless devices such as but not limited to cellular telephones and BlackBerry devices, all of which intentionally emit electromagnetic energy that may cause radio interference with an aircraft's radio systems. United already permits the use of certain unintentional transmitting portable electronic devices ("PEDs"), such as compact disk players and calculators, during select phases of flight.

general airline safety (including cabin and procedural issues governed by the FAA) before all regulatory limits are completely lifted.

**I. Any Proposed Airborne Use of T-PEDs Must be Carefully Evaluated to Ensure It Satisfies Stringent Airline Safety Standards.**

United is firmly committed to pursuing onboard technology products that are valued by its customers and meet its stringent airline safety standards. While United supports efforts to explore innovative technology in demand by its customers, United believes that adopting any for airborne use must be done only after rigorous review to ensure that the safety of its passengers and crew will not be compromised.<sup>2</sup>

In order to ensure the safe use of T-PEDs onboard an aircraft, United believes there must be clearly defined standards and considerable cooperation not only between airlines and the FAA, but also coordination between the FAA and the FCC. United urges the Commission to work hand in hand with the FAA to ensure that safety concerns regarding radio interference resulting from the airborne use of T-PEDs are addressed. Sections 301 and 302(a) of the Communications Act of 1934, as amended, 47 U.S.C. §§ 301, 302(a), provide the FCC with broad authority to develop regulations related to radio interference. FCC's statutory authority extends not only to ensuring that airborne radios do not interfere with terrestrial electronic systems, but also that PEDs and T-PEDs do not interfere with FCC licensed aircraft systems, such as communication and navigation radios.

United, in cooperation with the FAA, NASA, the FCC and other industry experts, has conducted extensive ground and airborne tests of radio frequency interference on commercial aircraft. These tests have shown that commercial aircraft radio systems are indeed susceptible to radio frequency interference from T-PEDs, such as those affected by this Notice. Because of these results, United believes that, before any agency completely lifts restrictions on the airborne use of T-PEDs, more extensive testing should be done to determine the effectiveness of pico cell systems to prevent aircraft radio frequency interference.<sup>3</sup>

While pico cell systems may be a means of addressing radio frequency interference, United is concerned that the Commission, in announcing its objective of "relax[ing] or remov[ing] the Commission's prohibition on the airborne use of cellular telephones", has not given any guidance on the rigor of the review process required to approve a pico cell T-PED for operation onboard an aircraft. 70 FR 11916. The lack of specific FCC standards may not

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<sup>2</sup> Last year, at the request of the FAA, RTCA, Inc., published a report that provides an up-to-date evaluation on the use of transmitting PEDs, such as cellular devices, on board an aircraft. RTCA, Inc., "Guidance on Allowing Transmitting Portable Electronic Devices (T-PEDs) on Aircraft," October 19, 2004. RTCA's guidance document provides interested parties with a recommended process by which they can assess the risk of interference by T-PEDs, such as cellular telephones.

<sup>3</sup> RTCA is currently conducting tests to consider the airborne use of T-PED technologies, such as ultra wideband devices and pico cells for airborne telephone use. Id. RTCA is expected to provide the FCC with any revised recommended emission levels for these devices.

only result in inconsistent application of engineering testing techniques but may also cause confusion among T-PED users. The Commission's silence could, therefore, have serious ramifications on airline safety.

In order to be certified for aircraft installation, United believes that pico cell systems must have a demonstrated ability to effectively safeguard against radio frequency interference<sup>4</sup> that may result from the airborne use of multiple T-PEDs – transmitting simultaneously in indeterminate numbers, frequencies and location within an aircraft. In addition, as the FCC is aware, T-PED radio technologies differ not only in the United States but also internationally, including cases of geographically specific frequency assignments. Pico cell systems must, therefore, be able to safely accommodate multiple varieties of T-PEDs from different countries in order to be considered for aircraft installation. The Commission should ensure that certification for pico cell T-PEDs involves extensive analysis to address problems associated with pico cell system failure, which may actually increase the possibility of interference with aircraft radio systems and terrestrial systems operating under FCC authorizations by triggering the full operation of multiple pico cell T-PEDs in use at the time of the pico cell's failure.

## **II. The Commission Should Also Adopt Further Safeguards to Ensure The Airborne Use of T-PEDs Will Not Compromise Airline Safety.**

As it considers lifting or easing its regulations governing the airborne use of T-PEDs, United believes the Commission should also proactively address potential consumer confusion over which devices and modes of operation may be approved for airborne use. Because cellular telephones and other T-PEDs can contain different technologies in the same or very similar exterior packaging, the Commission should recognize that it is impractical to use airline crew members to police passenger use of T-PEDs.<sup>5</sup> United urges the Commission to adopt additional safeguards, such as those cited below, in order to ensure that only approved and compatible T-PEDs are actually used onboard an aircraft.

First, in order to prevent consumer confusion as to which devices are approved for airborne use, United recommends for the FCC to adopt standardized labeling requirements for all T-PEDs that would explicitly identify whether the device meets all safety requirements for airborne use and with which type of system. The standardized labeling should address complex issues such as but not limited to differing aircraft types, differing frequency assignments from different countries, and safe failure modes. Adoption of such a labeling requirement is fully within the FCC's authority under Section 302 of the Communications Act

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<sup>4</sup> This would include radio frequency interference with aircraft radio equipment and system-level effects.

<sup>5</sup> As the RTCA found, "[i]t is impractical to establish a prohibition against a specific T-PED technology while permitting the operation of other technologies when the devices are indistinguishable to the casual observer." See, "Guidance on Allowing Transmitting Portable Electronic Devices (T-PEDs) on Aircraft," at page 2.

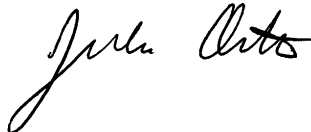
of 1934, as amended, to establish reasonable regulations to govern the sale or marketing of any device that could potentially cause interference to radio communications.<sup>6</sup>

Second, and perhaps even more importantly, United recommends for the FCC to also require the adoption of technology that would prevent an incompatible pico cell T-PED from seeking a connection with an external cell system. Manufacturers could meet this requirement in a variety of ways. For example, pico cell T-PEDs could be pre-programmed to automatically shut off if they fail to connect with an aircraft's pico cell system within a reasonable period of time. Pico cell T-PEDs could also be pre-programmed to cease all attempts at a connection and display a message advising the user of its incompatibility with the aircraft's pico cell if connection is not achieved within a defined period of time.

### Conclusion

United supports the FCC's efforts to ease limits on the airborne use of appropriate cellular devices provided that the Commission addresses its concerns over aircraft safety. United is committed to working collaboratively with the FAA and FCC in ensuring that it can safely adopt the airborne use of transmitting electronic devices that may be of interest to its customers.

Sincerely,

A handwritten signature in black ink, appearing to read "Julie Oettinger", written in a cursive style.

Julie Oettinger

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<sup>6</sup> See 47 U.S.C. § 302; *see also* 47 C.F.R. 15.19 (labeling requirements applicable to devices capable of emitting electromagnetic energy).